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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/061,026  | 01/30/2002  | Hiroyuki Maruyama    | 02037/LH            | 7849             |
| 1933  | 7590        | 04/29/2004           | EXAMINER            |                  |
| FRISHAUF, HOLTZ, GOODMAN & CHICK, PC<br>767 THIRD AVENUE<br>25TH FLOOR<br>NEW YORK, NY 10017-2023 |             |                      | LEE, SEUNG H        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2876                |                  |

DATE MAILED: 04/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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7590 03/24/2004

BRACEWELL & PATTERSON, L.L.P.  
Intellectual Property Law  
P.O. Box 969  
Austin, TX 78767-0969

EXAMINER

LEE, SEUNG H

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 03/24/2004

*Remain*

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |   |  |   |  |
|------------------------------|---|--|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/061,026  |  | <b>Applicant(s)</b><br>MARUYAMA, HIROYUKI |  |
|                              | <b>Examiner</b><br>Seung H Lee  |  | <b>Art Unit</b><br>2876                   |  |
|                              | -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- |  |   |  |

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on \_\_\_\_.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-18 is/are rejected.

7) ☐ Claim(s) \_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
       Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
       Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All    b) ☐ Some \* c) ☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/29/03</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____.<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: ____ |
|---|---|

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 5, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Saruta (US 6,631,967).

Saruta teaches a printer comprising a printer controller (40) serving as an imaging forming section for controlling printing procedures and a printer engine (5) wherein the printer engine comprising a black ink cartridge (107K) and a color ink cartridge (107F) in which the black/color ink cartridges serves as second print boards, the printer controller also comprising a PC serving as a control section for controlling the printer controller wherein the controller including a CPU serving as a data processing

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device, each cartridges comprising a control board (186) serving as a printed circuit board wherein the control board comprising a plurality of parts/element such as a control IC (200) for transferring the data between the cartridge and printer, a RAM (210) for storing a information temporarily, a storage element or nonvolatile memory (80) for storing information, the storage element storing various information regarding ink cartridge including remaining quantity of ink information, the cartridge and printer are connected via parallel connection (49), the storage element also comprising a first storage area and a third storage area (650) for storing data such as date of manufacture, serial number serving as an IC code (see Figs. 1, 3-5, 8, 10-15, 17-18; col. 2, line 32- col. 6, line 39; col. 7, line 35-col. 9, line 18; col. 14, line 23-col. 17, line 35).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saruta.

The teachings of Saruta have been discussed above.

In addition to the teachings of Saruta as discussed above, he also teaches that the memory of the ink cartridge further storing remaining quantity information of ink (S57) (see Fig. 11 and 15; col. 19, line 49-col. 23, line 14).

Although, Saruta fail to particularly teach the storing element storing time period of energized state, a number of time of energizing, etc., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the storing element of the Saruta to store various information in order to provide an user friendly system for storing the various information according to each user need, that is, the storage element could store first data of using the each cartridge for notifying data installation to user in needed and/ the storage element could store number of the copies printed with installed ink cartridges, and therefore an obvious expedient.

6. Claims 8-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saruta in view of Bengtson US 2001/0037462 A1).

The teachings of Saruta have been discussed above.

In addition to the teachings of Saruta as discussed above, he also teaches that the memory of the ink cartridge further comprises the storage element also comprising a first storage area and a third storage area (650) for storing data such as date of manufacture, serial number serving as an IC code, version data of the ink cartridge, data on type of ink, and data on production line, judging the installed ink cartridges are

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suitable (S34), the PC having monitor (MT) for displaying information thereon (see col. 19, line 49-col. 23, line 14).

However, Saruta fails to particularly teach that the security code.

Bengtson teaches a printer (106) comprising a replaceable ink cartridge storing a private key (426) associated with a serial number (see Figs. 4 and 5; paragraph 0028).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Bengtson to the teachings of Saruta in order to provide a security by authenticating user and/or document to be printed with a private key associated with the serial number stored in the printer cartridge. Moreover, such modification would provide a convenience for administrator of the system by limiting numbers of pages to be printed with particular print cartridge, and therefore an obvious expedient.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saruta as modified by Bengtson as applied to claim 8 above, and further in view of Phillips et al. (US 6,332,062).

The teachings of Saruta/Bengtson have been discussed above.

Although, Saruta/Bengtson teach the printer comprises a cartridge having a storage means, he fails to particularly teach that the PC is connected to the network for transmitting the status of the cartridge.

However, Phillips teaches a printing system comprising printer (30) and a computer (66) wherein the computer is connected to a vendor system (70) via a network (76) (see Fig. 3; col. 4, lines 25-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Phillips to the teachings of Saruta/Bengtson in order to provide an user-friendly system means for downloading various messages from in the vendor/manufacture via network in case the print cartridge needed particular attention such as a remaining ink quantity in installed cartridge is low, and therefore an obvious expedient.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure;  
Shinkai [US 2002/0017570] discloses a printer cartridge comprising memory therein for storing information.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday to Friday from 7:30 AM to 4:00 PM.




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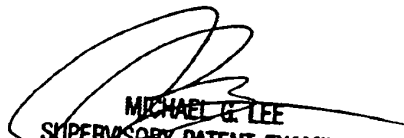
If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax-phone number for this group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [seung.lee@uspto.gov].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

  
Seung H. Lee  
Art Unit 2876  
March 17, 2004

  
MICHAEL G. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800